ALBUQUERQUE-SANTA FE TRANSPORTATION CORRIDOR

ALTERNATIVES ANALYSIS

FINAL REPORT

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Prepared for:
Federal Transit Administration
New Mexico Department of Transportation
Mid-Region Council of Governments

Prepared by:
URS

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EXECUTIVE SUMMARY

Introduction

This overview of the *Albuquerque-Santa Fe Transportation Corridor Alternatives Analysis* (AA) provides a general description of the AA process, the alternatives examined, and the identified preferred alternative which will undergo further assessment in the anticipated Environmental Assessment (EA) or Environmental Impact Statement (EIS) phase of analysis. This AA consisted of the development of alternatives and evaluation of each at three levels of analysis: general, conceptual and detailed. The alternatives developed were screened at each level to determine the best candidate(s) to meet the project's purpose and need. As the alternatives proceeded through each level, they were defined and evaluated at an increasing level of detail. The evaluation criteria evolved through each level, starting with broad, qualitative measures at the General Screening Level and becoming more focused at the Conceptual and Detailed Levels by using quantitative measures when possible.

Project Description

The Federal Transit Administration (FTA), in cooperation with the New Mexico Department of Transportation (NMDOT), the Mid-Region Council of Governments (MRCOG) and the Santa Fe MPO, jointly initiated and prepared this AA to identify multi-modal transportation improvements between Albuquerque and Santa Fe, New Mexico. The transportation improvements for the entire corridor are being considered along both the highway alignment (Interstate 25) and nearby railroad alignments (Burlington Northern Santa Fe Railway [BNSF] and the Santa Fe Southern [SFS]). The study area incorporates a number of communities, including the City of Albuquerque, City of Rio Rancho, Town of Bernalillo, City of Santa Fe, unincorporated Bernalillo, Sandoval and Santa Fe Counties as well as the Sandia, Santa Ana, San Felipe, Cochiti, and Santo Domingo Pueblos. See **Figure A: Albuquerque-Santa Fe Alternatives Analysis Study Area**.

Project Background

The Albuquerque-Santa Fe Corridor is the center of population and the economic, financial, governmental, and educational heart of the State of New Mexico. This corridor is critical for commuters, goods, tourism, business and government for nearly one million residents and two million visitors every year. The corridor has many unique features, including connections between the Albuquerque International Airport and the State Capitol in Santa Fe.

The highway between Albuquerque and Santa Fe is primarily four through-lanes for the roughly 60-mile distance between the two cities. There is very little in the way of system redundancy or alternate routes available between the two cities. Some transportation improvements have been made to accommodate increasing levels of growth within and around the cities of Albuquerque and Santa Fe. See **Figures B** and **C** for photographs of the existing highway and rail alignments in the rural area of the study area.

Planning is needed immediately to address the future needs of the I-25 corridor. It is widely agreed that mobility in the corridor is expected to decline significantly over time and that multi-modal transportation alternatives are necessary for the area.

FIGURE A: ALBUQUERQUE-SANTA FE ALTERNATIVES ANALYSIS STUDY AREA

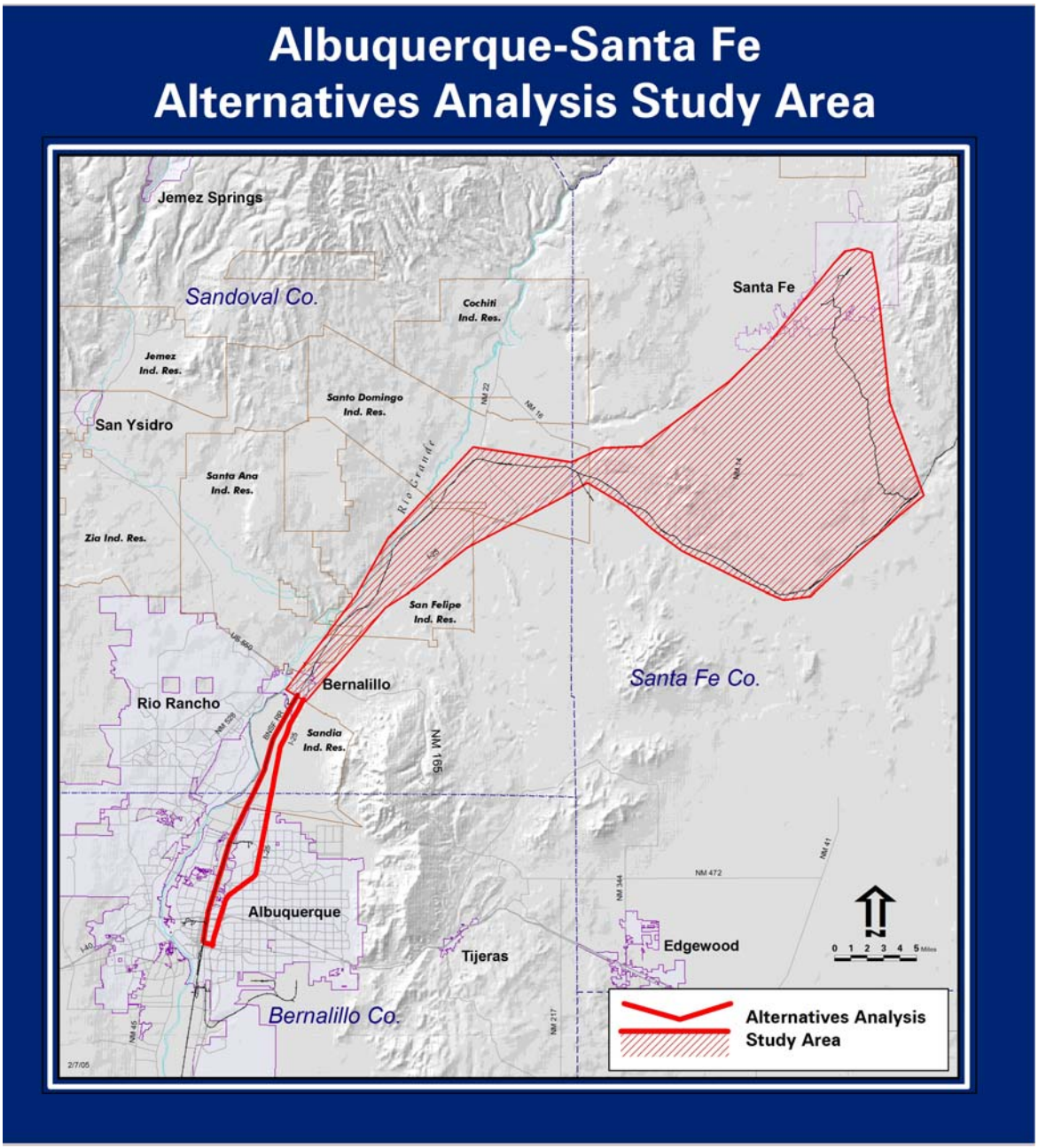


FIGURE B: I-25 AT LA BAJADA HILL

FIGURE C: BNSF RAILWAY EAST OF I-25

Participants

A Technical Advisory Committee (TAC) consisting of agency representatives and stakeholders that may be interested in or affected by recommendations of this study was assembled to review the AA process and its findings. The TAC is a consortium of federal, state, and local agencies, and includes the FHWA, NMDOT, MRCOG, Santa Fe MPO, and the five Pueblos in the corridor, among others.

Purpose

The purpose of the *Albuquerque-Santa Fe Transportation Corridor Alternatives Analysis* project is to **improve mobility** between Albuquerque and Santa Fe while:

1. Providing a cost-effective transportation alternative to general purpose lanes in the I-25 corridor;

2. Providing travel time reliability in the corridor;

3. Maintaining sensitivity to Native American lands in the corridor;

4. Supporting and enhancing access to and development of Albuquerque, Santa Fe, and other activity centers in the corridor; and

5. Minimizing environmental impacts.

Need

The need for transportation improvements in the Albuquerque-Santa Fe corridor is summarized in the following statements:

1. Options for mode of travel are limited.

2. Santa Fe employees are increasingly commuting to Santa Fe from the greater metropolitan Albuquerque area due to sharply rising housing costs in the City of Santa Fe and Santa Fe County.

3. Population and employment growth are increasing in both Albuquerque and Santa Fe.

4. Regional transit service has only recently been available and needs to expand to meet demand.

5. Existing roadway facilities are limited.

Population and employment in the corridor is expected to grow nearly 20 percent between 2005 and 2025. The largest increase in population will be in Santa Fe County with the largest increase in employment in Sandoval County. The overall population within the corridor is projected to increase from 505,060 in 2005 to 600,001 in 2025. The overall employment within the corridor is projected to increase from 384,420 in 2005 to 460,956 in 2025.

Levels of service (LOS) define a roadway's capacity to manage traffic congestion on a given section of road at a given time. An A through F LOS rating system describes the degree of traffic congestion. LOS A is free-flowing traffic. LOS F is traffic at a standstill. The traffic analysis in this AA indicates that without improvements, in 2025 morning southbound traffic on I-25 will be at a LOS of C, with morning northbound traffic at a LOS of E.

Goals and Objectives

Six major goals were developed from the Purpose and Need statement, to guide the development of evaluation criteria. Those goals are:

1. Provide economic benefits to the study area;
2. Improve travel safety in the corridor;
3. Provide benefits to the human environment;
4. Minimize impacts to the natural environment;
5. Minimize engineering and construction requirements and constraints; and
6. Improve overall corridor mobility, travel conditions, and cost-effectiveness.

Alternatives Evaluation Process

The public involvement process was initiated in the fall of 2004. Public open houses and/or TAC meetings were held in November 2004, February, March, April and August of 2005. To help assure the selection of the best alternative, evaluation results for each level of screening have been presented to the general public and the TAC.

The development and evaluation of alternatives for the Albuquerque-Santa Fe AA was conducted at three levels:

1. General Screening
2. Conceptual Screening
3. Detailed Evaluation

1. General Screening

General alternatives consisted of a broad range of alternatives. These alternatives were compared against the proposed purpose and need for this project and for environmental impacts. Seventeen alternatives were screened and reduced to 10 for evaluation at the Conceptual Alternatives Level. The General Alternatives Screening Memo was issued in February 2005.

2. Conceptual Screening

The alternatives remaining after the General Screening Process were developed to a Conceptual Level of Detail in early 2005. Ten alternatives were screened and reduced to five for evaluation at the Detailed Alternatives Level. The Conceptual Alternatives Definition and Evaluation Memo was issued in May 2005.

3. Detailed Evaluation

After receipt of public input and approval from the TAC, the five remaining alternative concepts were screened at the Detailed Alternatives Level and a preferred alternative was recommended. The Detailed Alternatives Evaluation Memo was issued in September 2005.

The definition and evaluation of the General Alternatives is the first step in the alternatives analysis process. These alternatives are broad, corridor-level ideas about how to meet the transportation needs for the project. Alignment and technology alternatives are subjected to three steps:

1. Comparison of the alternatives to the Purpose and Need of the project. This step is a simple "pass-fail" test of the alternative to make sure that it possesses a potential to meet the project's needs as defined in the Purpose and Need statement (providing a cost-effective transportation alternative to general purpose lanes in the I-25 corridor; providing travel time reliability in the corridor; etc.)

2. Reasonableness test: Any alternatives remaining as a result of Step 1 are then subjected to an analysis to determine if they meet the definition of a "reasonable range" of transportation improvements. First, if an alternative has much greater complexity than those that provide a similar transportation function (such as greater construction difficulty or potential environmental impacts, greater right-of-way needs, incompatibility with existing or planned local technologies, or if the alternative is unproven in service in a setting similar to the study corridor), then it would be subject to another layer of examination. If the alternative would provide the same or similar level of transportation service and improvement as a less-complex alternative, a condition of overlap would exist and it would not be carried forward for further study.

3. Stand-Alone or Complementary: Each remaining alternative would then be analyzed to determine if it is a corridor-level, stand-alone improvement, or if the alternative could be considered to be a complementary alternative (supportive to one or more of the other alternatives as design or operational options).

Table A shows the criteria used to evaluate the alternatives remaining at the Conceptual and Detailed Evaluation Levels. These criteria are based on the six goals developed in relation to the purpose and need statement.

TABLE A: EVALUATION CRITERIA FOR CONCEPTUAL AND DETAILED LEVELS

Category/Criteria	Conceptual	Detailed
1. Economic Benefits		
1A. Jobs added to the region		X
1B. Economic competitiveness		X
1C. Indirect benefits to the regional economy		X
1D. Financial viability		X
2. Safety and Security		
2A. System reliability	X	X
2B. Improvements to emergency preparedness		X
2C. Improvements in safety (as measured by accidents)		X
3. Benefits to the Human Environment		
3A. Direct property impacts (takings and acreage required)	X	X
3B. Impacts to Native American pueblos	X	X
3C. Community impacts to non-Native American areas	X	X

Category/Criteria	Conceptual	Detailed
3D. Consistency with local land use policies, comprehensive plans and identified community values	X	X
3E. Impacts to environmental justice neighborhoods		X
3F. Impacts on parks and recreation areas		X
3G. Impacts on National Register and archaeological sites		X
3H. Impacts on noise sensitive areas		X
4. Impacts to the Natural Environment		
4A. Major flood plains, drainages, and wetlands affected		X
4B. Major land forms and mining areas affected		X
4C. Known rare, threatened, and endangered species affected		X
4D. Important habitat for game animals affected		X
4E. Hazardous materials sites affected		X
4F. Unique geological features and important visual resources affected		X
4G. Air quality impacts		X
5. Engineering Requirements and Constraints		
5A. Project feasibility	X	X
5B. Capital costs	X	X
5C. Operations and maintenance costs		X
5D. Constructability	X	X
6. Improvements to mobility and travel conditions		
6A. Operational characteristics/service design	X	X
6B. Transit system connectivity, accessibility, and parking	X	X
6C. Proximity to activity centers	X	X
6D. Total benefits to users, including comfort and convenience		X
6E. Changes in travel time to selected major activity centers		X
6F. Accessibility to jobs		X
6G. Levels of service on highways		X
6H. User benefits per dollar costs		X
6I. Cost effectiveness	X	X
6J. Accessibility to major trip generators	X	X
6K. Operational and maximum capacity by mode	X	X

There are three existing alignments considered for transportation improvements in the Albuquerque-Santa Fe Corridor: the I-25 alignment, the BNSF Railway alignment, and the SFS railroad alignment. These alignments are divided into two segments with the division at the base of the La Bajada escarpment, or approximately mile marker 264 along I-25.

In the southern segment of the study area south of La Bajada Hill, I-25 and the BNSF line are the only alignments in consideration. North of La Bajada Hill, several potential rail alignments were studied that veer off of the existing BNSF line and include the Santa Fe Southern (SFS) line between Lamy and Santa Fe. Only two rail alternatives remained at the Detailed Level of analysis.

Alternatives Evaluated

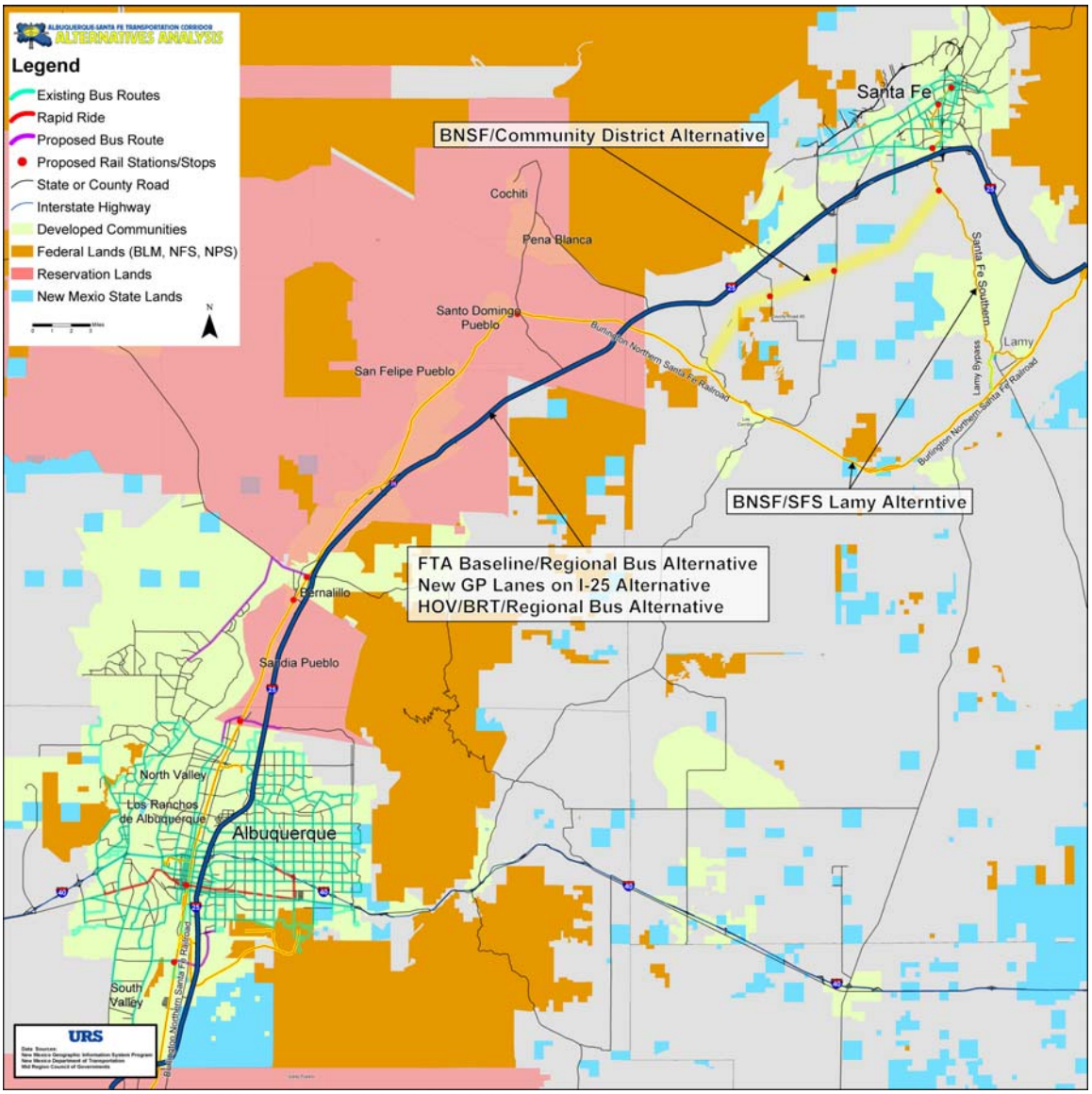
The alternatives evaluated in this AA were developed from recommendations of previous studies, public input at public meetings, and review of current conditions and demands. The highway alternatives were developed from current plans and projects for I-25, as well as concepts developed as part of this AA. The rail alternatives were also developed from previous studies and current plans of the State and local agencies, as well as concepts developed as part of this AA. In order to reflect a relatively equivalent level of service for both transit service on the highway and rail service, a similar operating plan (relative to transit service) was developed for each. The highway transit service plan is based upon operations 7 days per week for 17 hours per day with a peak period service frequency of 15 minutes. The rail service plan is based upon operations 7 days per week for 17 hours per day with a peak period service frequency of 30 minutes. Actual operating characteristics may vary from this assumption, particularly during start up. The number of stations, parking lots, and other common features were also identified.

New highway alternative alignments parallel to I-25 were considered, but were dropped because of the potential requirement for additional right-of-way through Pueblo lands. Based on statements from governing Pueblo officials, acquisition of new right-of-way was considered a fatal flaw.

The BNSF/Community District Alternative for rail was developed later in the study in response to requests for faster travel time and consideration of potential origin and destination densities along I-25.

See **Figure D** for an overview of the alternatives that were evaluated at the Detailed Level.

FIGURE D: OVERVIEW MAP OF DETAILED ALTERNATIVES



A brief description of each of the five alternatives reviewed at the Detailed Level of analysis follows.

FEDERAL TRANSIT ADMINISTRATION (FTA) BASELINE/REGIONAL BUS ALTERNATIVE

The FTA Baseline/Regional Bus Alternative is the No Action Alternative with the application of transportation system management (TSM) measures and the addition of a robust regional bus network. This alternative is also considered/referred to as the TSM alternative in some of the data in Appendix 1 of the Detailed Alternatives Evaluation Memo. The regional bus network would

feature designated park-and-ride facilities along the corridor and expanded bus service. This alternative is aimed at providing transit capacity at a level similar to that of a major fixed guideway improvement, but at a much lower cost. "Incident management" or TSM strategies that could be implemented to address occurrences such as auto accidents or inclement weather, include: assignment of roving incident response teams ("HELP Trucks") to assist or remove disabled vehicles from I-25 or key roadways that serve as "collectors" to I-25 as quickly and efficiently as possible; provision of ample (paved) shoulders along I-25 so disabled vehicles can easily and quickly be moved from I-25 travel lanes; and/or installation of systems for coordinating traffic lights along major arterial streets to expedite smoother traffic flows.

NEW GENERAL PURPOSE LANES ON I-25 ALTERNATIVE

This alternative adds new general-purpose highway lanes to the existing I-25 facility to improve capacity. The alternative would add one new lane in each direction on I-25 in Albuquerque, between Comanche Road and Tramway; one new lane on I-25 in each direction between US 550 in Bernalillo and Saint Francis Drive (US 84/285) in Santa Fe, and capacity improvements into downtown Santa Fe via Saint Francis Drive. New general-purpose lanes have already been planned between Tramway and Bernalillo and are the subject of a separate project. The New General Purpose Lanes on I-25 Alternative also includes adding more capacity with reconstruction on select arterials leading to I-25 in both Albuquerque and Santa Fe.

HOV/BRT/REGIONAL BUS ON I-25 ALTERNATIVE

Similar to the New General Purpose Lanes on I-25 Alternative, this alternative would provide one new high-occupancy vehicle (HOV) lane in each direction on I-25 between Comanche Road and Tramway in Albuquerque and on I-25 between US 550 in Bernalillo and Saint Francis Drive in Santa Fe. Its primary purpose is to provide service to transit vehicles, buses and carpools/vanpools along the length of the corridor in concert with the development of a park-and-ride network along I-25. The new HOV lanes would be separated from the existing general-purpose lanes by a buffer or a barrier for the length of the corridor. Where buffer-separated on rural segments, vehicles would enter and exit the highway with general traffic. Where barrier-separated in the more congested urban areas in Albuquerque, vehicles would access the lanes through barrier breaks or direct ramps. The alternative would include direct access ramps at designated stations/park-and-rides and priority treatment on arterials in Albuquerque and Santa Fe.

This alternative could provide high-frequency (and potentially higher-capacity) bus service with faster travel times than would be seen under current conditions.

The physical limits required for widening I-25 are the same with the HOV/BRT/Regional Bus on I-25 Alternative as with the New General Purpose Lanes on I-25 Alternative.

BNSF/SFS (LAMY) ALTERNATIVE

This commuter rail alternative consists of approximately 65.2 miles of the existing BNSF between Albuquerque and Lamy and either of the following options:

Option A: BNSF to proposed Lamy Bypass to the SFS to the Santa Fe Depot

Option B: BNSF to Village of Lamy onto the SFS to the Santa Fe Depot

For either option, the SFS track would be upgraded to accommodate increased maximum operating speeds to 60 mph for passenger trains. This should result in an average speed of 35 to 40 mph, which in turn, would result in an average one-way trip time between the junction, at either the bypass or Lamy, and the SFS Depot of approximately 30 minutes. The track upgrade would include undercutting and lowering the track or converting the open deck bridges to ballasted deck bridges in order to eliminate the current speed restrictions due to the transition between ballasted track and the non-ballasted bridges. The outer rail on some curves would be elevated to allow faster operating speeds without the need for re-alignment. The length of the SFS rail between Lamy and Santa Fe is 15.0 miles. Approximately 2.5 miles of new track would be required for the proposed Lamy Bypass. New rail and ties would be installed and the at-grade crossings would also be improved wherever required.

BNSF/COMMUNITY DISTRICT ALTERNATIVE

This commuter rail alternative is approximately 68.5 miles long (16.4 miles is being implemented in Phase I of commuter rail project, and 52.1 miles in this phase). It follows the existing BNSF track between Albuquerque and I-25 mile marker 264 and continues along the BNSF for approximately 4.5 miles from mile marker 264/I-25 before heading northeast around the base of the La Bajada escarpment and then generally parallels the I-25 corridor to the north. Approximately 16.4 miles of new track would be required on the new alignment after departing from the BNSF track until reconnecting to the Santa Fe Southern track south of I-25.

Goals and Objectives as Decision Discriminators

Each alternative was evaluated against the established goals/criteria developed for this AA. A brief discussion of each goal follows. Major decision discriminators for the alternatives according to each goal are summarized in **Table D** at the end of the Executive Summary.

Economic Benefits

Transportation system improvements can benefit the quality of life and local economy in communities across the country by providing safe, efficient and economical transportation service. By adding public transportation to a system, the additional modal choices contribute to the sustenance of healthy economies. According to the American Public Transportation Association (APTA), the following are some of the most significant benefits of public transportation, which can translate into economic benefits:

- Eases traffic congestion
- Saves money
- Creates and sustains jobs
- Provides access to jobs
- Stimulates economic development
- Boosts real estate values
- Fosters more livable communities
- Provides mobility for seniors
- Provides access for rural areas
- Improves air quality
- Reduces energy consumption
- Enhances mobility during emergencies
- Ensures safety

The anticipated socio-economic growth in the Albuquerque-Santa Fe region over the next several decades will be well served by the transportation system improvements proposed by this alternatives analysis. The results of these improvements are likely to be: time savings, choices for commuters and other travelers in the region, and increased economic development potential due to increased accessibility.

To help measure the economic benefits of the Detailed Alternatives, four categories of criteria were used: Jobs Added to the Region, Economic Competitiveness, Indirect Benefits to the Regional Economy, and Financial Viability.

Safety and Security

The safety and security of each of the alternatives is evaluated against system reliability, a plan for emergency operations, and improvements in safety, as measured by accidents. The results of the safety and security evaluation indicate the rail-related alternatives surpassed the highway-related alternatives primarily due to an overall lower rate of incidents.

Benefits to the Human Environment

The human environment may be affected a number of ways by the proposed transportation improvements in this corridor. In particular, right-of-way requirements may impact individual properties, Native American lands, local land use policies, environmental justice neighborhoods, park and recreation areas, historic and archaeological sites, and areas that may be sensitive to potential noise increases.

Benefits and impacts of each alternative vary depending on the resource/alignment being examined. The human environment analysis of each alternative in this AA was consistent with a fatal flaw analysis. Each alternative will be more closely examined in the subsequent EA or EIS.

Impacts to the Natural Environment

The natural environment impacts were measured for each alternative using a variety of sources, including aerial photography, web pages and databases of resource agencies, and others. Environmental factors were documented for each alternative.

This documentation is not an attempt to measure potential adverse impacts of proposed transportation alternatives; instead it helps alert the project team to potential environmental conditions that need to be investigated further in future environmental studies.

The BNSF/Community District alignment is the only alternative with potential to disrupt the existing natural environment. Impacts of each alternative vary depending on the resource/alignment being examined. The natural environment analysis of each alternative in this AA was consistent with a fatal flaw analysis. Each alternative will be more closely examined in the subsequent EA or EIS.

Engineering Requirements and Constraints

The purpose of this goal is to examine the costs and engineering feasibility of implementing each alternative. Capital costs and operations and maintenance costs are compared to determine which

alternative provides the most economically efficient transportation system for the Albuquerque to Santa Fe travel corridor. Preliminary cost estimates were prepared for each alternative in 2005 U.S. dollars. **Tables B** and **C** show the estimated capital and operations/maintenance costs for each alternative.

TABLE B: ESTIMATED CAPITAL COSTS

Alternative	Estimated Capital Costs[1,2]	Estimated Cost/Mile	Number of P-n-R/ RR Stns
FTA Baseline/Regional Bus	$32.4 M	$0.5 M	6
New GP Lanes on I-25	$280.4 M	$4.5 M	N/A
HOV/BRT/Regional Bus on I-25	$360.9 M	$5.8 M	6
BNSF/Lamy Bypass	$228.1 M	$2.8 M	10
BNSF/Lamy	$225.8 M	$2.7 M	10
BNSF/Community District	$317.5 M	$4.6 M	9

Source: URS Corporation, June 2005.

[1]Costs shown above include capital costs of operating equipment, buses and trains, needed to serve ridership through 2025, based on 2005 dollars. [2]Initial capital costs to provide service for opening day would be less than shown here. See costs for Preferred Alternative in Table D.

TABLE C: ESTIMATED OPERATIONS AND MAINTENANCE COSTS

Alternative	Estimated O & M Costs Per Year[1]
FTA Baseline/Regional Bus	$9.9 M
New GP Lanes on I-25	$8.1 M
HOV/BRT/Regional Bus on I-25	$17.9 M
BNSF/Lamy Bypass	$22.2 M
BNSF/Lamy	$23.1 M
BNSF/Community District	$18.4 M

Source: URS Corporation, June 2005.

[1]Costs shown above include operations and maintenance costs related to the operating system needed to serve ridership through 2025, based on 2005 dollars. Initial O&M costs to provide service for opening day would be less than shown here. See costs for Preferred Alternative in Table D.

Improvements to Mobility and Travel Conditions

The average daily vehicle miles traveled (VMT) is increasing on the I-25 corridor. To appropriately maintain the expected increase in average daily VMT, NMDOT and MRCOG desire to provide a cost-effective transportation alternative to the I-25 corridor that interfaces with Phase I of the Commuter Rail Project being implemented between Belen and Bernalillo. The goals are to improve mobility and travel conditions. Operational characteristics of each proposed alternative were examined in this section, as were transit system connectivity and general proximity and accessibility to activity centers and jobs. Expected ridership on the alternative

modes of regional bus and commuter rail was compared, as was the cost effectiveness of each alternative. **Table D** summarizes improvements to mobility and travel conditions, with characteristics and costs for each alternative.

Recommendation

The findings for each alternative explored in this AA were presented to the general public and members of the TAC for discussion, and ultimately the **BNSF/Community District Alternative** was designated as the preferred alternative because it best meets the Purpose and Need of the project.

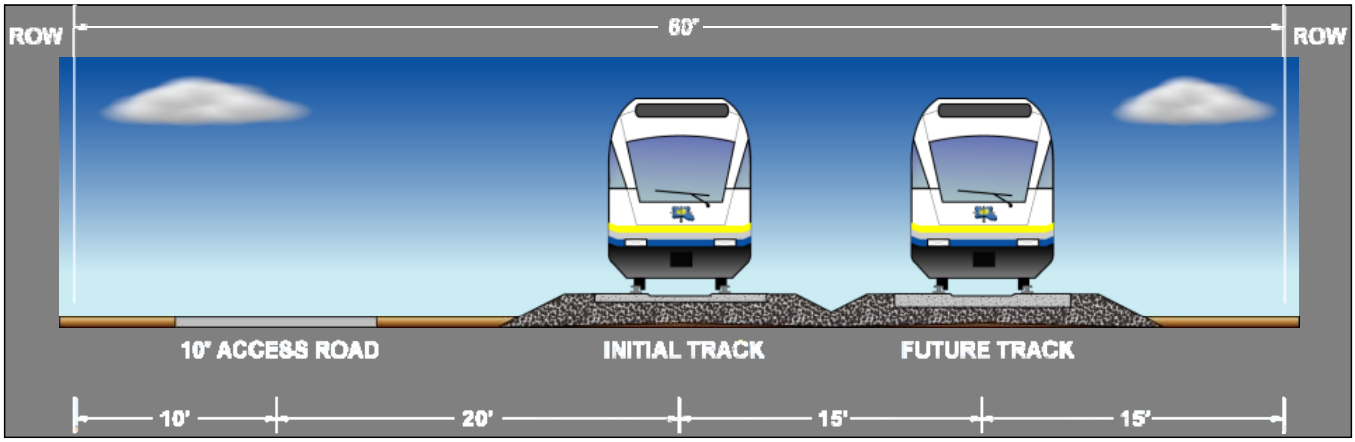
Additionally, the City of Santa Fe, in cooperation with Santa Fe County, has been working on the implementation of commuter rail service between Santa Fe and Eldorado as a separate "New Starts" project. This project and the Albuquerque – Santa Fe project will need to be coordinated to insure that there are opportunities to accommodate both in the portion of the corridor that could ultimately serve both purposes. The study also recognizes the need for near term operational improvements on I-25 between Albuquerque and Santa Fe including the implementation of ITS at a level that would provide the NMDOT with the capability of monitoring the corridor in real time and notifying drivers of conditions in the corridor well in advance of any potential problems. This study has also resulted in an expression of interest from some of the communities in the region and the public to explore the longer-term potential of rail service connecting Santa Fe to the communities of Lamy, Pecos, Las Vegas, and beyond. Although the transportation issues associated with these markets were outside the scope and purpose of this Alternatives Analysis, due consideration should be given to these expressions of interest in future planning.

The initial capital costs for the BNSF/Community District Alternative, with service projected to begin in 2008, are estimated to be $239.3 million. The operations and maintenance costs related to the initial operating system are estimated to be $15.5 million. These estimates are in 2005 U.S. dollars. Capital and O&M costs related to the 2025 operating system are shown in Table D of the Executive Summary.

The BNSF/Community District alternative is subject to a more detailed review and analysis during the next phase of analysis in either an EA or EIS.

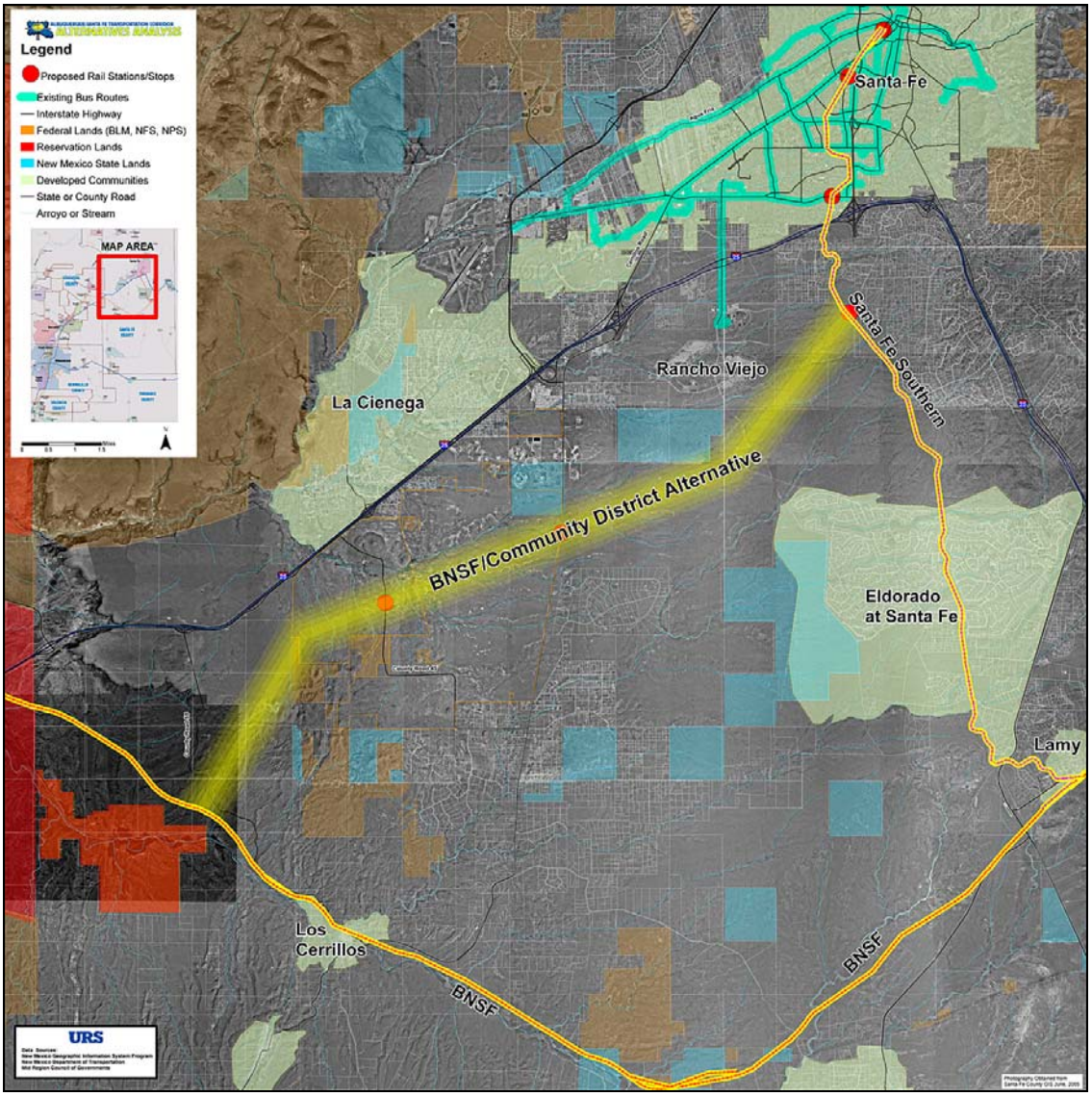
Please see **Figures E** and **F** for illustrations of the proposed typical BNSF railroad section for the Community District, and the BNSF/Community District Preferred Alternative.

FIGURE E: PROPOSED TYPICAL NEW RAILROAD SECTION – MINUMUM 60 FEET



The typical right-of-way width depicted in **Figure E** represents the basic width requirements for track when the railroad is located on relatively flat terrain. In areas of steep or rugged terrain, additional width would be needed to contain the longer side slopes created by high embankments and deep cuts. Long side slopes in steep or rugged terrain are likely to result in right-of-way greater than 100 feet.

FIGURE F: PREFERRED ALTERNATIVE - BNSF/COMMUNITY DISTRICT ALTERNATIVE



The preferred BNSF/Community District Alternative would follow existing BNSF track between Albuquerque and Santa Fe. It would veer off the existing BNSF track at a point approximately 4.5 miles from mile marker 264/I-25 where it would head northeast around the base of La Bajada Hill. It would require approximately 16.4 miles of new track on a new alignment generally paralleling I-25 before reconnecting to the SFS track south of I-25.

Table D on the next page summarizes the major characteristics and costs of each alternative.

TABLE D: SUMMARY OF MAJOR CHARACTERISTIC AND COSTS PER ALTERNATIVE

	HIGHWAY ALTERNATIVES			RAIL ALTERNATIVES		
Cost Consideration	**FTA Baseline**	**New GP Lanes on I-25**	**HOV/BRT**	**Lamy Bypass**	**Lamy**	**Community District (Preferred Alternative)**
Route Miles of Service (combined Phase I and Phase II miles)	62	62	62	82.2	85.3	68.5
One-way Travel Time (minutes)	152	108	80	102	106	83
Typical Headway (minutes)	15		15	30	30	30
Daily Ridership	1,555	1,014	3,704	2,239	2,239	2,954
Passengers per Vehicle	40		40	140	140	140
Passengers per Hour	120		120	Up to 560	Up to 560	Up to 560
Annual Ridership	404,376	263,671	962,918	632,094	632,094	818,071
Number of Stations Served	6	0	6	10	10	9
Capital Cost incl. trains and buses (mil) (for 2025 operating system)	$32.4	$280.4	$360.9	$228.1	$225.8	$317.5 in 2025/ $239.3 initially
Avg Capital Cost per Mile (mil)	$0.5	$4.5	$5.8	$2.8	$2.7	$4.6
Annual O&M Cost (mil) (for 2025 operating system)	$9.9	$8.1	$17.9	$22.2	$23.1	$18.4 in 2025/ $15.5 initially
Annualized Capital Cost / Annual TransitRider	$6.19	$69.48	$25.28	$28.95	$28.78	$30.33
Implementability: Funding	Portion included in TIP and STIP	Portion included in TIP and STIP	Portion included in TIP and STIP	FTA Small Starts and STIP	FTA Small Starts and STIP	FTA Small Starts and STIP

Capital Costs for the rail alternatives are for the Bernalillo to Santa Fe segment of the Albuquerque to Santa Fe corridor. Capital costs for the highway alternatives are for the entire corridor, but do not include the segment from Tramway to US 550 in Bernalillo.